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Aims. The purpose of this study was to measure the impact of an online sport psychology education module on the attitudes and behaviours of qualified sports physiotherapists in the UK. *Methodology.* Ninety-five sport physiotherapists studied either a sport psychology module or a control module, and their attitudes and behaviours towards sport psychology were measured prior to studying the module and at three points over a six-month period following its completion. *Findings.* It was found that those who had studied the sport psychology module demonstrated an improvement in their attitudes towards sport psychology immediately following its completion that was significantly higher than those who had studied the control module. Use of sport psychology also increased following the sport psychology module, with significant differences seen between the intervention and control group on the sport psychology subscale, indicating that those who had studied the sport psychology module were integrating more sport psychology techniques into their practice than those who had studied the control module. *Conclusion.* It was concluded that the online sport psychology module was effective in improving the attitudes and behaviours of UK physiotherapists and that more sport psychology education opportunities should be made available.

Keywords: sport psychology; physiotherapy education; psychology of sport injury; education; psychology

Introduction

Negative psychosocial responses to sport injury such as anxiety, frustration and anger are commonplace and can impact on the rehabilitation process (1, 2). Whilst the benefits of sport psychology intervention (e.g. increased adherence, pain management and recovery rate) during injury rehabilitation are well documented (3) it appears that sport psychology is underused by physiotherapists (4). Various researchers have consequently suggested that a lack of education and training in this field is a causative factor and have called for further, more structured training in sport psychology for physiotherapists and

other sports injury rehabilitation professionals (SIRPs) (4-6). Research examining the undergraduate training of UK physiotherapists has identified that there are deficiencies in psychology education with vast inconsistencies in provision between institutions (7). This means that qualified physiotherapists often have an inadequate understanding of psychological factors and how to deal with them, therefore, post-qualification education in sport psychology could have a positive impact on the attitude and behaviour of physiotherapists. It would appear that such training would be well received as previous research has revealed that SIRPs express a desire to develop their knowledge of sport psychology theory and practice (4, 8, 9).

Research examining a wide spectrum of SIRPs, including physiotherapists, has revealed that they consistently show a positive attitude towards the role of sport psychology during injury rehabilitation, demonstrating an awareness of psychological reactions to sports injury and the potential importance of psychological intervention during rehabilitation (1). Whilst this would suggest that SIRPs of various guises recognise the importance of sport psychology and use it accordingly, deeper investigation reveals that this is not quite the case. Firstly, whilst SIRPs generally hold a positive attitude towards sport psychology, this does not always extend to implementation (4). Secondly, it would seem that there are discrepancies between the types of sport psychology interventions SIRPs favour and research evidence (10, 11). It would appear that SIRPs gravitate towards more practical techniques that are motivational in nature such as goal setting (9). This is perhaps indicative of the fact that SIRPs often develop their skills in delivering psychological support through experiential rather than formal learning and lack confidence, knowledge and training relating to specific techniques (5). It could also be indicative of a perception that delivering sport

psychology support is beyond the professional role of the SIRP and is best delivered by a sport psychologist, as part of a holistic sports medicine support team (5, 12, 13).

Whilst SIRPs have a positive attitude towards sport psychology and appear to integrate some sport psychology into their work with injured athletes, it is clear that there are gaps in their knowledge and practice. This coupled with the consistent finding that SIRPs themselves wish to gain more knowledge on the psychological aspects of sports injury indicates a need for more training. Preliminary studies undertaken on North American student athletic trainer populations have shown support for sport psychology education interventions (14-16), but no studies have examined physiotherapists in this context and none have been UK based. Whilst some similarities exist between athletic trainers and physiotherapists, the differences in their training and professional role suggest that more specific investigation is required of UK physiotherapists. Additionally, these existing studies (14-16) all have relatively short follow-up periods (6-14 weeks post-intervention) and consequently fail to examine the long term retention of sport psychology education. They also rely on student populations and thus their findings cannot easily be generalised to qualified SIRPs since there may be differences in receptivity to learning between student populations and qualified populations (17). The purpose of this longitudinal study was therefore to measure the impact of an online sport psychology education module on the sport psychology related attitudes and behaviours of qualified sports physiotherapists in the UK. The hypotheses are stated below.

Hypotheses

Hypothesis 1: There will be a significant difference in physiotherapists' *attitudes towards sport psychology* before and after (immediately, three-months and six-months) studying a sport psychology education module.

Hypothesis 2: There will be a significant difference in physiotherapists' *sport psychology related behaviours* before and after (immediately, three-months and six-months) studying a sport psychology education module.

Hypothesis 3: There will be a significant difference in *attitudes towards sport psychology* between the control group (physiotherapists who study a control education module) and the intervention group (physiotherapists who study a sport psychology module).

Hypothesis 4: There will be a significant difference in *sport psychology related behaviours* between the control group (physiotherapists who study a control education module) and the intervention group (physiotherapists who study a sport psychology module).

Materials and methods

Participants

The participants were 95 sport physiotherapists who responded to an invitation to participate in the study and completed all stages of post-module follow-up. The invitation stated that the purpose of the research was to evaluate the impact of sports science education packages on physiotherapists. The term 'sport psychology education' was deliberately not used to avoid recruiting participants who had a specific interest in sport psychology. The participants were randomly assigned to either an intervention or control group. The intervention group (n=44) comprised 23 males and 21 females and had a mean age of 33.70 years (SD = 8.16). The control group (n=51) comprised 26 males and 25 females and had a mean age of 36.11 years (SD = 8.78). The control group had more participants due to a lower attrition rate than the intervention group.

The level of previous exposure to any sport psychology education was low and comparable for the two groups. As this previous exposure to sport psychology education did not specifically relate to the psychological aspects of sports injury it was not used as an exclusion criterion for participation.

Education intervention

Participants in the intervention group studied an online module entitled "Sport Psychology for Physiotherapists", which was designed specifically for the study and evaluated by a panel of sport psychology and distance learning experts to ensure its appropriateness. The module required approximately 12 hours of study. The content was based upon the recommendations of Heaney et al. (18) and contained three units:

(1) understanding the psychological impact of sports injury,
(2) psychological skills and techniques for injured athletes, and
(3) referral and professional boundaries.

Participants in the control group studied an online module entitled "Strength and Conditioning for Physiotherapists", which was similar to the module "Sport Psychology for Physiotherapists" in terms of structure (3 units), length (12 hours) and delivery, but contained no sport psychology content. For both modules participants were required to complete three short online assessments (one per unit) and were invited to participate in a module forum within some of the module activities.

Measures

Data was collected through a questionnaire package completed on four occasions over a six-month period (one pre-module and three post-module). Each questionnaire package was split into two main sections: attitudes towards sport psychology and use of sport

psychology with injured athletes.

Attitudes towards sport psychology

This section of the questionnaire package, which was the same across all four data collection points, examined participants' attitudes regarding the effectiveness of mental skills during sports injury rehabilitation using the Attitudes About Imagery Survey (AAIS) (19). The AAIS contains fifteen items relating to the effectiveness of specific mental skills, which participants answer using a seven-point Likert scale. It has four subscales: mental imagery, positive self-talk, goal setting and pain tolerance, as well as a total score. With regard to validity and reliability the authors report test-retest reliability correlations of 0.60 to 0.84 on all fifteen items and state that four experts assessed the content validity of the AAIS (19). Cronbach alphas were reported as a further measure of reliability with scores ranging from $\alpha = 0.65$ to $\alpha = 0.90$ on the subscales (19).

Use of sport psychology with injured athletes

This section of the questionnaire package, which was again consistent across all four data collection points, examined participants' use of sport psychology skills and techniques as part of their work in treating injured sports performers using the Psychology of Injury Usage Survey (PIUS) (16). The PIUS contains thirty-six items relating to participants' use of various psychology-related strategies with injured athletes, which are required to be answered using a nine-point Likert scale. It has six subscales: communication, social support, motivation, attitude and attentiveness, relationship and sport psychology (imagery, relaxation, self-talk and cognitive restructuring), as well as a total score. With regard to validity and reliability the authors report that five experts in were responsible for ensuring content validity and refining the

initial pool of items (20). Inter-item reliability coefficients of between 0.72 and 0.89 were reported for the six subscales and the Cronbach alpha coefficients ranged from $\alpha = 0.66$ to $\alpha = 0.88$ on the subscales (20).

Procedure

Physiotherapists were invited to participate in the study through an email sent to all physiotherapists whose details appeared on the website of the Association of Chartered Physiotherapists in Sports and Exercise Medicine. Those wishing to participate in the study completed an online informed consent form and were then randomly assigned to either the intervention (sport psychology) group or the control group and asked to complete the pre-module version of the questionnaire package (PRE). Upon completing this, participants were given the web address for their specific module and asked to commence study. The participants were given a specified date by which they should complete the module which was four weeks after the start date.

Immediately following completion of the module, participants were directed to complete the first post-module questionnaire package (POST1). Participants were then contacted three-months and six-months after finishing the module to complete two further questionnaires (POST2 and POST3).

Data analysis

The AAIS and PIUS data were analysed using two separate 2 x 4 (group x time) ANOVAs. The first ANOVA analysed total score on the AAIS and thus tested hypotheses 1 and 3, whilst the second ANOVA analysed total score on the PIUS and thus tested hypotheses 2 and 4. Each of these was conducted to identify whether there were any significant differences between the intervention and control groups on the questionnaire scores, or any within group differences on the questionnaires over time.

As a follow-up to the ANOVAs investigating the total scores, a 2 x 4 (group x time) ANOVA was undertaken on each subscale of the AAIS and PIUS. Where a significant group by time interaction was evident a test of simple effects was undertaken to establish specifically where the differences were.

Results

Attitude towards sport psychology

The mean pre and post (POST1, 2, 3) scores for the intervention (psychology) and control groups on the four subscales of the AAIS questionnaire and the AAIS total score are summarised in Table 1.

AAIS total score

Figure 1 shows that both the intervention (sport psychology) and control groups demonstrated an improvement in their attitude towards sport psychology, as measured by the AAIS total score, immediately after studying the module (POST1), although the improvement was more pronounced for the intervention group who studied the sport psychology module. Both groups showed some decline during the six-months after the module, however, the control group returned to close to their pre-module scores, whilst the intervention group had continued to stay well above their pre-module scores, indicating a longitudinal effect of the sport psychology module.

In order to examine whether there were significant differences between the two groups on the AAIS questionnaire across the four data collection periods (hypothesis 3), or any within group differences on the questionnaire (hypothesis 1) a 2 x 4 (group x time) mixed ANOVA was undertaken on the total score of the AAIS. This revealed that there was no significant main effect for group ($F = 1.238$, $p = 0.269$, partial $\eta^2 = 0.013$), however, there was a significant main effect for time ($F(3, 91) = 12.210$, $p < 0.001$,

partial $\eta^2 = 0.287$) and a significant interaction between time and group ($F(3, 91) = 2.832$, $p = 0.043$, partial $\eta^2 = 0.085$).

Simple effects analyses revealed that the AAIS total scores changed significantly over time for the intervention (sport psychology) group ($F(3,279) = 9.71$, $p<0.001$), but not for the control group ($F(3,279)= 1.49$, $p = 0.218$). Of the four data collection points there was a significant difference between the two groups at one point – immediately following the completion of the modules (POST1) ($F(1,93) = 4.44$, $p = 0.038$).

AAIS subscales

On all four subscales both groups showed an increase in their scores immediately after studying the module (POST1), but this increase was more pronounced for the intervention (sport psychology) group on the imagery and self-talk subscales. The intervention group maintained scores that were above pre-module values in the six-months following the module on all four subscales, and had a larger positive difference between pre-module (PRE) and six-month post-module (POST3) scores than the control group on the imagery and self-talk subscales. On the remaining subscales the differences between the pre-module (PRE) and six-month post-module (POST3) scores were fairly similar for the intervention and control groups. In line with these observations the 2 x 4 (group x time) mixed ANOVAs undertaken on each subscale of the AAIS revealed a significant interaction between group and time on the imagery and self-talk subscales. The results of these ANOVAs are summarised in Table 2.

As significant interactions between time and group were evident in both the imagery and self-talk ANOVAs, simple effects analyses were undertaken. For the imagery subscale this revealed that the AAIS imagery scores changed significantly over time for the intervention (sport psychology) group ($F(3,279) = 10.48$, $p<0.001$), but not

for the control group (F(3,279)= 0.64, p = 0.587). No significant differences were evident between the two groups on any of the four data collection points.

The simple effects analysis for the self-talk subscale revealed that the AAIS self-talk scores changed significantly over time for the intervention (sport psychology) group (F(3,279) = 9.69, p<0.001), but not for the control group (F(3,279)= 1.23, p = 0.301). Of the four data collection points there was only a significant difference between the two groups at one point – immediately following the completion of the modules (POST1) (F(1,93) = 13.96, p<0.001).

Behaviour: Use of sport psychology

The mean pre and post (POST1, 2, 3) scores for each group on the six subscales of the PIUS questionnaire and the PIUS total score are summarised in Table 3.

PIUS total score

Figure 2 shows that both groups (intervention and control) demonstrated an increase in their use of sport psychology strategies after studying their respective modules. This increase continued for both groups over the six-month period following the completion of module, but was more pronounced for the intervention (sport psychology) group (overall improvement of 31.32 compared to 18.75).

To examine whether there were significant differences between the two groups on the PIUS questionnaire across the four data collection periods (hypothesis 4), or any within group differences on the questionnaire (hypothesis 2) a 2 x 4 (group x time) mixed ANOVA was undertaken on the PIUS total score. This revealed that there was no significant interaction between time and group ($F(3, 91) = 1.831$, $p = 0.147$, partial $\eta^2 = 0.057$) and no significant main effect for group ($F = 0.036$, $p = 0.850$, partial $\eta^2 <$

0.001). There was, however, a significant main effect for time ($F(3, 91) = 34.193$, $p < 0.001$, partial $\eta^2 = 0.530$).

PIUS subscales

On all six subscales of the PIUS both the intervention and control groups showed an increase in their scores immediately after studying their module (POST1), however, this increase was more pronounced for the intervention (sport psychology) group on all subscales except "communication". On these five subscales the intervention group had a greater increase in scores from PRE to POST1, with the largest increase seen on the "sport psychology" subscale. Both groups maintained scores that were above pre-module values in the six-months following the module on all six subscales, but the intervention group had a larger positive difference between pre-module (PRE) and six-month post-module (POST3) scores than the control group on all subscales. The 2 x 4 (group x time) mixed ANOVAs undertaken on each subscale of the PIUS revealed a significant interaction between group and time on the sport psychology subscale. The results of these ANOVAs are summarised in Table 4.

In light of the significant interaction between time and group evident in the sport psychology subscale ANOVA, a simple effects analysis was undertaken to identify where the differences lie. This revealed that the PIUS sport psychology subscale scores changed significantly over time for both the intervention (sport psychology) group ($F(3,279) = 57.80$, $p<0.001$), and the control group ($F(3,279)= 19.68$, $p<0.001$). Of the four data collection points there was only a significant difference between the two groups at one point – three-months after the completion of the modules (POST2) ($F(1,93) = 6.83$, $p = 0.010$).

Discussion

The purpose of this study was to evaluate the impact of an online sport psychology education module on the sport psychology related attitudes and behaviours of qualified sports physiotherapists in the UK. Overall the results indicate that the sport psychology education intervention had a positive impact on the physiotherapists, supporting and extending the findings of previous research examining the impact of sport psychology education on SIRPs (14-16).

Hypothesis 1 was accepted as attitudes towards sport psychology (AAIS total scores) changed significantly over time for physiotherapists who studied the sport psychology module. Participants studying the sport psychology module demonstrated an increase in their attitude (AAIS total) scores from pre-module to immediately post-module. This would suggest that the sport psychology module was effective in improving attitudes in relation to sport psychology. Whilst some decline in attitude scores was evident in the six-months following the completion of the module (POST1 to POST3) the physiotherapists continued to hold attitude scores that exceeded basal levels.

Hypothesis 2 was also accepted as sport psychology related behaviour (PIUS total) scores changed significantly over time for physiotherapists who studied the sport psychology module. This would suggest that the sport psychology module was effective in improving the physiotherapists' use of sport psychology. Participants studying the sport psychology module demonstrated an increase in their PIUS total scores at each data collection point from pre-module to six-months post-module. This trend is different to that seen in relation to attitude where some decline was evident in the six-months following the completion of the module. This is perhaps indicative of a period of assimilation being required for physiotherapists to absorb the information covered in the

module and gradually gain in confidence to be able to integrate sport psychology into their practice.

As physiotherapists in the intervention group demonstrated significantly higher attitude towards sport psychology (AAIS total) scores than physiotherapists in the control group immediately following the completion of the module, hypothesis 3 was accepted. This provides further evidence that studying the sport psychology module improved the sport psychology related attitudes of the physiotherapists.

Whilst the intervention group improved their sport psychology behaviour (PIUS total) scores following their study of the module, so did the control group, albeit to a lesser extent. As such, although the intervention group showed greater levels of improvement than the control group, the differences between the groups was not statistically significant and so hypothesis 4 was rejected. It should, however, be noted that whilst there were no significant differences between the groups in relation to the total PIUS score, there was a significant difference seen on the sport psychology subscale of the PIUS, suggesting that those who had studied the sport psychology module were integrating more sport psychology techniques such as imagery, relaxation and self-talk into their practice.

The unexpected improvement in the scores of the control group could be attributed to the questionnaire package. Whilst the control group were not exposed to any sport psychology within their module, they were on four occasions asked to complete a questionnaire package in which they were asked several questions about sport psychology. It is plausible that this in itself could have stimulated interest in sport psychology and a greater awareness of sport psychology practice, which could lead to improvements in attitude and behaviour.

Deeper investigation of the subscale scores on the PIUS and AAIS reveals some interesting findings that support previous research which has suggested that SIRPs who have not received sport psychology training tend to gravitate towards using more practical sport psychology techniques that are motivational in nature (9). Goal-setting, for example, is a motivational strategy that is well established within the SIRP community (8, 17). This would suggest that prior to studying the module participants were likely to already be using techniques that fit into this category and may therefore have had more limited scope for improvement in these areas. The results support this to some extent with no significant interactions between time and group seen on, for example, the PIUS motivation subscale or the AAIS goal setting subscale. In contrast, the sport psychology subscale scores on the PIUS (use of imagery, relaxation, self-talk and cognitive restructuring) and imagery and self-talk subscale scores on the AAIS, which are techniques that SIRPs tend to be less familiar with (10, 17), all showed a significant interaction between time and group, indicating that for techniques that tend to be less familiar to SIRPs the intervention group demonstrated significantly greater improvement than the control group.

Limitations and future directions

Whilst this study has revealed some interesting findings, and has addressed some of the limitations of previous research in this area (e.g. use of student populations, limited investigation of longitudinal impact of education, USA participants only) it does have some limitations. Firstly, the participants in both groups had high basal attitudes and behaviours in relation to sport psychology, perhaps due to the self-selection participant recruitment methods used. This limited the capacity for significant improvements to be made. Secondly there were limitations related to the questionnaire package. As with any self-report measure, there was risk of social desirability response bias influencing

results. Additionally, some of the items relied on the accuracy of the participants' recall. A final limitation of the questionnaire, which has already been discussed, is that it may have inadvertently stimulated an interest in sport psychology amongst the control group minimising the capacity for differences to be seen between the intervention and control groups.

Conclusions

This study provides evidence that sport psychology education addressing the psychological aspects of sports injury is effective in improving the sport psychology related attitude and behaviour of qualified UK physiotherapists working in sport. Such an improvement can have a beneficial impact on the practice of physiotherapists and the experience of the injured athletes they treat. This coupled with previous research findings that have revealed that physiotherapists have expressed a desire for further training in sport psychology (10) suggests that opportunities for physiotherapists and other SIRPs to be exposed to sport psychology education should be maximised. There is consequently a real need for sport psychology continuing professional development opportunities to be made available to qualified UK physiotherapists.

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Table 1. Mean AAIS scores and standard deviations.

SUBSCALE	GROUP	PRE		POST1		POST2		POST3	
		Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Total	Psych	82.59	8.94	90.66	8.71	88.52	8.18	87.89	10.08
	Control	84.08	8.34	86.84	8.87	86.43	8.51	85.25	15.45
Imagery	Psych	40.05	6.15	45.43	6.62	44.32	6.21	43.41	7.53
	Control	42.14	5.65	43.33	6.35	42.63	6.02	42.27	9.32
Goal Setting	Psych	12.82	1.35	13.18	1.24	12.89	1.22	13.16	1.12
	Control	12.29	1.63	12.88	1.52	12.82	1.31	12.65	2.24
Self - Talk	Psych	17.50	2.23	19.30	1.36	18.61	1.67	18.61	1.87
	Control	17.53	1.98	17.90	2.13	18.10	1.87	17.71	3.15
Pain	Psych	12.23	2.00	12.75	1.83	12.70	1.49	12.70	1.39
	Control	12.11	1.76	12.73	1.46	12.88	1.21	12.63	2.24

Table 2. Summary of 2x4 mixed ANOVA results for the 4 AAIS subscales (those marked with an asterisk were significant at the 0.05 probability level.

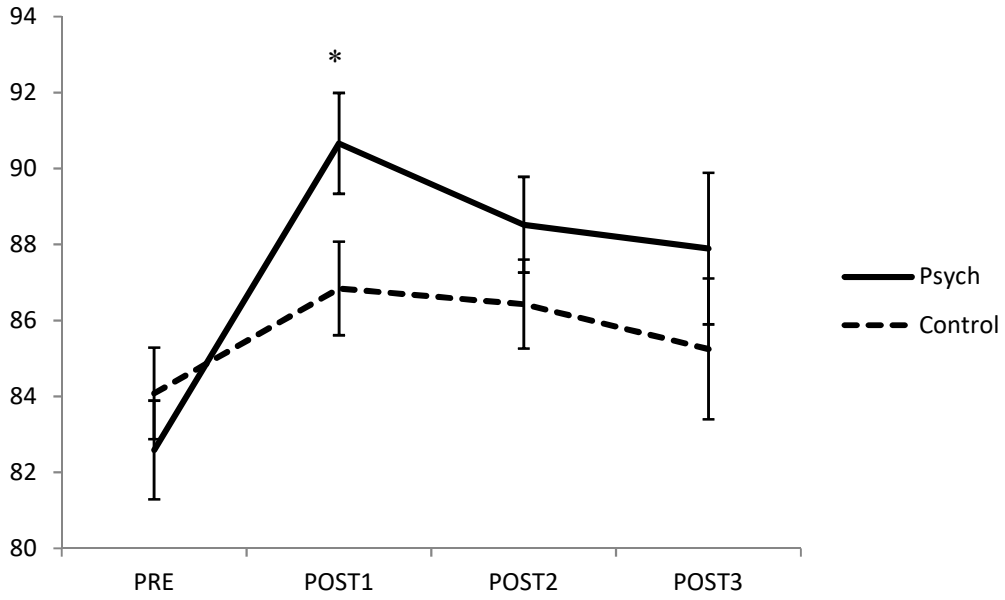
Subscale	Time x Group Interaction	Main Effect - Time	Main Effect - Group
Imagery	$F(3, 91) = 3.937$, $p = 0.011$, partial $\eta^2 = 0.115$*	$F(3, 91) = 10.164$, $p < 0.001$, partial $\eta^2 = 0.251$*	$F = 0.398$, $p = 0.529$, partial $\eta^2 = 0.004$
Goal setting	$F(3, 91) = 0.856$, $p = 0.467$, partial $\eta^2 = 0.027$	$F(3, 91) = 2.726$, $p = 0.049$, partial $\eta^2 = 0.082$*	$F = 2.343$, $p = 0.129$, partial $\eta^2 = 0.025$
Self-talk	$F(3, 91) = 4.013$, $p = 0.010$, partial $\eta^2 = 0.117$*	$F(3, 91) = 9.192$, $p < 0.001$, partial $\eta^2 = 0.233$*	$F = 4.459$, $p = 0.037$, partial $\eta^2 = 0.046$*
Pain tolerance	$F(3, 91) = 0.291$, $p = 0.831$, partial $\eta^2 = 0.010$	$F(3, 91) = 5.409$, $p = 0.002$, partial $\eta^2 = 0.151$*	$F = 0.001$, $p = 0.975$, partial $\eta^2 > 0.001$

Table 3. Mean PIUS scores and standard deviations.

SUBSCALE	GROUP	PRE		POST1		POST2		POST3	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	Psych	238.91	32.30	263.77	30.85	269.86	28.39	270.23	28.61
	Control	246.27	22.73	263.12	22.88	264.59	24.25	265.02	43.79
Social Support	Psych	42.89	6.19	45.91	5.33	46.84	5.21	46.57	4.92
	Control	43.90	4.33	46.47	4.51	46.43	4.20	46.22	7.76
Relation-ship	Psych	38.36	5.11	40.18	3.90	40.38	3.67	40.30	3.65
	Control	38.78	4.33	39.57	4.09	40.14	3.86	39.65	6.88
Sport Psych	Psych	30.16	11.91	44.66	13.71	48.70	12.07	48.36	12.12
	Control	33.47	9.23	41.82	10.33	42.12	12.40	44.18	13.23
Attention	Psych	30.41	3.90	31.50	2.77	31.34	2.99	31.91	3.06
	Control	30.98	2.57	31.62	2.11	31.67	2.67	31.57	5.11
Commun-ication	Psych	55.77	4.84	56.68	4.73	57.20	4.48	57.36	4.38
	Control	56.84	4.11	58.10	4.38	58.51	3.37	57.39	9.02
Motivation	Psych	41.31	7.26	44.84	6.16	45.39	6.35	45.73	5.92
	Control	42.29	7.09	45.53	5.64	45.72	6.00	46.02	8.03

Table 4. Summary of 2x4 mixed ANOVA results for the 6 PIUS subscales (those marked with an asterisk were significant at the 0.05 probability level).

Subscale	Time x Group Interaction	Main Effect - Time	Main Effect - Group
Social Support	$F(3, 91) = 0.682$, $p = 0.565$, partial $\eta^2 = 0.022$	$F(3, 91) = 15.800$, $p < 0.001$, partial $\eta^2 = 0.342$*	$F = 0.058$, $p = 0.810$, partial $\eta^2 = 0.001$
Relationship	$F(3, 91) = 0.855$, $p = 0.467$, partial $\eta^2 = 0.027$	$F(3, 91) = 5.223$, $p = 0.002$, partial $\eta^2 = 0.147$*	$F = 0.131$, $p = 0.719$, partial $\eta^2 = 0.001$
Sport Psychology	$F(3, 91) = 5.256$, $p = 0.002$, partial $\eta^2 = 0.148$*	$F(3, 91) = 48.874$, $p < 0.001$, partial $\eta^2 = 0.617$*	$F = 1.592$, $p = 0.210$, partial $\eta^2 = 0.017$
Attention	$F(3, 91) = 0.451$, $p = 0.717$, partial $\eta^2 = 0.015$	$F(3, 91) = 3.836$, $p = 0.012$, partial $\eta^2 = 0.112$*	$F = 0.116$, $p = 0.734$, partial $\eta^2 = 0.001$
Communication	$F(3, 91) = 0.387$, $p = 0.762$, partial $\eta^2 = 0.013$	$F(3, 91) = 4.875$, $p = 0.003$, partial $\eta^2 = 0.138$*	$F = 1.394$, $p = 0.241$, partial $\eta^2 = 0.015$
Motivation	$F(3, 91) = 0.124$, $p = 0.946$, partial $\eta^2 = 0.004$	$F(3, 91) = 18.800$, $p < 0.001$, partial $\eta^2 = 0.383$*	$F = 0.246$, $p = 0.621$, partial $\eta^2 = 0.003$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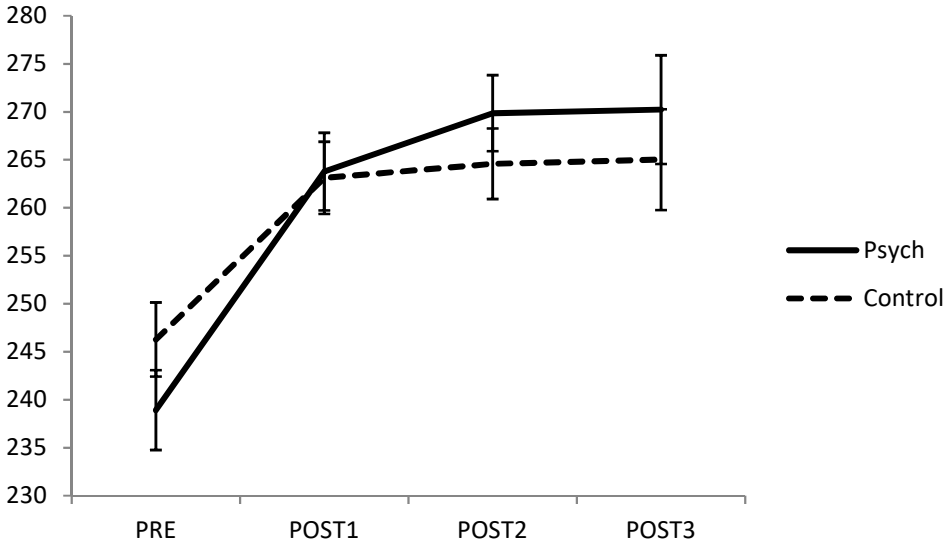
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Psych
Control

Figure 1. Mean AAIS total scores, with standard error bars. Note that a higher score indicates a more positive attitude towards sport psychology (* = significant difference between groups at this time point).

Figure 2. Mean PIUS total scores, with standard error bars. Note that a higher score indicates a higher level of use of sport psychology strategies (* = significant difference between groups at this time point).